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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/573,799	03/28/2006	Jochen Laubender	3614	7707

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EXAMINER	
COLEMAN, KEITH A	

ART UNIT	PAPER NUMBER
3709	

MAIL DATE	DELIVERY MODE
09/04/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/573,799	LAUBENDER, JOCHEN	
	Examiner	Art Unit	
	Keith A. Coleman	3709	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-9 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-9 is/are rejected.

7)☒ Claim(s) 3-9 is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on 28 March 2006 is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date 3/28/2006.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claims 2, 3-9 are objected to because of the following informalities: In claim 1, it states an apparatus only and not a method. Claims 3-9 claim either a device or method. Method needs to be removed from the claims. In claim 2, the claim lacks "steps" as required in a method claim. Appropriate correction is required.

Specification

2. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

3. The abstract of the disclosure is objected to because on line 1 "invention" should not appear in the abstract. Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-4 and 6-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Ueda et al. (US Patent No. 6,340,016).

With regards to claim 1, the patent to Ueda et al. discloses a device (21) for controlling an internal combustion engine (1), characterized in that a calculation means (Col. 7, Lines 10-55), before a start of the engine (1, Col. 7, Lines 30-36), recognizes a possible self-ignition operating state (S26, Figure 3) as a function of operating parameters and ascertains suitable control parameters for preventing this possible self-ignition operating state (Abstract).

With regards to claim 2, the patent to Ueda et al. further discloses a method for controlling an internal combustion engine (1), characterized in that before a start of the engine (1, Col. 7, Lines 30-36), as a function of operating parameters (Col. 7, Lines 9-25), a possible self- ignition operating state is recognized, and control parameters suitable for preventing this possible self- ignition operating state are ascertained (Abstract).

With regards to claim 3, the patent to Ueda et al. further discloses a device (21) as defined by claim 1, characterized in that as a function of the control parameters (Col. 7, Lines 9-25), an injection device is varied (Col. 8, Lines 1-10).

With regards to claim 4, the patent to Ueda et al. further discloses a device (21) as defined in claim 1, characterized in that for ascertaining the control parameters (Col. 7, Lines 1-25), at least the position of a cylinder that on starting is the first to enter compression or begin an intake stroke (Col. 13, Lines 10-25) and a variable that represents a combustion chamber temperature (T) are taken into account as operating parameters (Col. 7, Lines 13-17).

With regards to claim 6, the patent to Ueda et al. further discloses a device (21) as defined claim 1, characterized in that in a direct injection internal combustion engine (1, Abstract), the fuel injection is varied such that the fuel injection does not occur until once the cylinder entering into compression has passed its top dead center (Figures 13-15, Col. 16, Lines 1-25).

With regards to claim 7, the patent to Ueda et al. further discloses the device (21) defined in claim 1, characterized in that the rpm of the starter (6) is varied such that the combustion chamber temperature (T) remains below a critical temperature threshold (Col. 13, Lines 10-25 and Lines 41-53). Using broadest reasonable interpretation, it should be noted that "varied" includes actuation and forward rotation of the starter motor's shaft, which both inherently varies the rpm.

With regards to claim 8, the patent to Ueda et al. further discloses the device (21) defined in claim 1, characterized in that the rpm of the starter (6, S120) is varied such

that the combustion chamber pressure remains below a critical pressure threshold (Col. 14, Lines 27-43).

With regards to claim 9, the patent to Ueda et al. further discloses the device (21) defined in claim 1, characterized in that an injection quantity is increased such that the combustion chamber temperature remains below, or drops below, a critical temperature threshold (Figure 10, S122, Col. 16, Lines 34-55).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein

were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ueda et al. (US Patent No. 6,340,016) in view of Akimoto (US Patent No. 5,676,108).

With regards to claim 5, Ueda et al. discloses all the limitations of claim 4. Ueda et al. does not disclose an intake air temperature is taken into account as a control parameter. The patent to Akimoto discloses a device (20), characterized in that for ascertaining the control parameters (Col. 2, Lines 57-64), an intake air temperature is taken into account (Col. 4, Lines 5-10, Col. 5, Lines 53-57). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to provide the ECU of Ueda et al. with the air intake parameter in view of the teaching to Akimoto, in order to determine when pre-ignition occurs under different engine operating conditions (Col. 5, Lines 51-57).

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure Mukai et al. (US Patent No. 3,908,611) and Kurii et al. (US Patent No. 3,941,204) show the current state of the art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Keith A. Coleman whose telephone number is 571-270-3516. The examiner can normally be reached on Monday through Friday between 8-5 Eastern Time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrence Till can be reached on (571) 272-1280. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Terrence R. Till
Supervisory Patent Examiner

KAC
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